

### ABSTRACT

A semiconductor device having trench isolation regions in which leaks are suppressed may be formed using the following steps. (a) Forming a trench 32 in a semiconductor layer 12; (b) forming a dielectric layer 40 that fills the trench 32; and (c) conducting a thermal treatment of the dielectric layer 40, wherein the thermal treatment is conducted at temperatures of 1050°C or higher.

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